CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

1. A method for managing interaction with a presentation of a tree structure in a graphical user interface, the method comprising the steps of:

displaying a tree structure on a first portion of a graphical user interface;

receiving a search request for an object in the tree structure having a predefined value via a second portion of the graphical user interface;

displaying a search result in a third portion of the graphical user interface, the search result comprising one or more locations that satisfy the search request; and

in response to selection of one of the locations, modifying the tree structure to display the selected location of the object having the predefined value.

2. The method of claim 1, wherein the step of modifying the tree structure to display the selected location comprises expanding the tree structure.

3. The method of claim 1, wherein the step of modifying the tree structure to display the selected location comprises highlighting the object having the predefined value.

4. The method of claim 1, wherein the step of receiving a search request for an object comprises the step of receiving text via a text box displayed in the second portion of the graphical user interface.

5. The method of claim 1, wherein the third portion of the graphical user interface comprises a pop-up window.

6. The method of claim 1, wherein the tree structure comprises one or more parent objects, at least one of the parent objects having one or more child objects.

7. The method of claim 6, wherein the tree structure represents the contents of a computer.

8. The method of claim 1, wherein the tree structure comprises a root object, one or more first-level objects, one or more second-level objects, and one or more third-level objects.

9. The method of claim 8, wherein:

the tree structure correlates to a model of a printed circuit board used in an x-ray inspection control system, the printed circuit board having one or more components having one or more pins soldered to the printed circuit board;

the root object corresponds to a family object that specifies a type of solder joint;

the one or more first-level objects correspond to a package object that specifies a type of component;

the one or more second-level objects correspond to an instance that specifies a unique designator for a package; and

the one or more third-level objects correspond to a pin object that specifies a unique pin number for a specific component.

10. A system for managing interaction with a presentation of a tree structure in a graphical user interface, the system comprising:

logic configured to:

display a tree structure on a first portion of a graphical user interface;

receive a search request for an object in the tree structure having a predefined value via a second portion of the graphical user interface;

display a search result in a third portion of the graphical user interface, the search result comprising one or more locations that satisfy the search request; and

modify, in response to selection of one of the locations, the tree structure to display the selected location of the object having the predefined value;

a processing device configured to implement the logic; and

a display device configured to support the graphical user interface.

11. The system of claim 10, wherein the logic is further configured to modify the tree structure to display the selected location by expanding the tree structure.

12. The system of claim 10, wherein the logic is further configured to modify the tree structure to display the selected location by highlighting the object having the predefined value.

13. The system of claim 10, wherein the logic is further configured to receive the search request for an object via a text box displayed in the second portion of the graphical user interface.

14. The system of claim 10, wherein the third portion of the graphical user interface comprises a pop-up window.

15. The system of claim 10, wherein the tree structure comprises one or more parent objects, at least one of the parent objects having one or more child objects.

16. The system of claim 15, wherein the tree structure represents the contents of a computer.

17. The system of claim 10, wherein the tree structure comprises a root object, one or more first-level objects, one or more second-level objects, and one or more third-level objects.

18. The system of claim 17, wherein:

the tree structure correlates to a model of a printed circuit board used in an x-ray inspection control system, the printed circuit board having one or more components having one or more pins soldered to the printed circuit board;

the root object corresponds to a family object that specifies a type of solder joint;

the one or more first-level objects correspond to a package object that specifies a type of component;

the one or more second-level objects correspond to an instance that specifies a unique designator for a package; and

the one or more third-level objects correspond to a pin object that specifies a unique pin number for a specific component.

19. A computer program embodied on a computer-readable medium for managing interaction with a presentation of a tree structure in a graphical user interface, the computer program comprising logic configured to:

display a tree structure on a first portion of a graphical user interface;

receive a search request for an object in the tree structure having a predefined value via a second portion of the graphical user interface;

display a search result in a third portion of the graphical user interface, the search result comprising one or more locations that satisfy the search request; and

modify, in response to selection of one of the locations, the tree structure to display the selected location of the object having the predefined value.

20. The computer program of claim 19, wherein the logic is further configured to modify the tree structure to display the selected location by expanding the tree structure.

21. The computer program of claim 1, wherein the logic is further configured to modify the tree structure to display the selected location by highlighting the object having the predefined value.

22. The computer program of claim 19, wherein the logic is further configured to receive the search request for an object via a text box displayed in the second portion of the graphical user interface.

23. The computer program of claim 19, wherein the third portion of the graphical user interface comprises a pop-up window.

24. The computer program of claim 19, wherein the tree structure comprises one or more parent objects, at least one of the parent objects having one or more child objects.

25. The computer program of claim 24, wherein the tree structure represents the contents of a computer.

26. The computer program of claim 19, wherein the tree structure comprises a root object, one or more first-level objects, one or more second-level objects, and one or more third-level objects.

27. The computer program of claim 26, wherein:

the tree structure correlates to a model of a printed circuit board used in an x-ray inspection control system, the printed circuit board having one or more components having one or more pins soldered to the printed circuit board;

the root object corresponds to a family object that specifies a type of solder joint;

the one or more first-level objects correspond to a package object that specifies a type of component;

the one or more second-level objects correspond to an instance that specifies a unique designator for a package; and

the one or more third-level objects correspond to a pin object that specifies a unique pin number for a specific component.

28. A system for managing interaction with a presentation of a tree structure in a graphical user interface, the system comprising:

a means for displaying a tree structure on a first portion of a graphical user interface;

a means for receiving a search request for an object in the tree structure having a predefined value via a second portion of the graphical user interface;

a means for displaying a search result in a third portion of the graphical user interface, the search result comprising one or more locations that satisfy the search request; and

a means for modifying the tree structure to display the selected location of the object having the predefined value in response to selection of one of the locations.

29. The system of claim 28, wherein the means for modifying the tree structure logic expands the tree structure.

30. The system of claim 30, wherein the tree structure comprises a root object, one or more first-level objects, one or more second-level objects, and one or more third-level objects.

31. The system of claim 30, wherein:

the tree structure correlates to a model of a printed circuit board used in an x-ray inspection control system, the printed circuit board having one or more components having one or more pins soldered to the printed circuit board;

the root object corresponds to a family object that specifies a type of solder joint;

the one or more first-level objects correspond to a package object that specifies a type of component;

the one or more second-level objects correspond to an instance that specifies a unique designator for a package; and

the one or more third-level objects correspond to a pin object that specifies a unique pin number for a specific component.